



# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 986,750	11 09 2001	Richard M. Pres	0942,5080001 RWE:ERC	5957

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EXAMINER

SCHULTZ, JAMES

ART UNIT	PAPER NUMBER
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1635

DATE MAILED 03 11 2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/986.750

Applicant(s)

PIRES ET AL.

Examiner

J. Douglas Schultz

Art Unit

1635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on January 2, 2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

***Response to Amendment***

2. Applicants' submission of new claims 22-25 has been noted and entered.

***Response to Arguments***

3. Applicant's response filed January 2, 2003 has been considered. Rejections and/or objections not reiterated from the previous office action mailed July 2, 2003 are hereby withdrawn. The following rejections and/or objections are either newly applied or are reiterated and are the only rejections and/or objections presently applied to the instant application.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-21 stand rejected, and added claims 22-25 are newly rejected, under 35 U.S.C. 103(a) as being unpatentable over Kempe et al., in view of Lyttle et al. (both of record), for the same reasons of record as set forth in the Office action mailed July 2, 2003.

The claims of the instant invention are drawn to a method of cleaving an oligonucleotide from a linker using a gaseous nucleophile, wherein the linker is a universal linker, or is not the 3'-terminal of the nucleotide, or the ester linkage between the 3'-OH of the oligo and the phosphate of the linker is cleaved, or wherein the linker contains a phosphorus containing heterocycle after cleavage, or wherein the linker contains 2 vicinal heteroatoms, or wherein the nucleophile is ammonia or hydrated ammonia vapors, or wherein cleavage may take place between 1 and 240, or room temperature and 150, or at 95 degrees Celsius, or wherein cleavage is substantial, or wherein said cleaved oligos are recovered by washing the solid phase in water or buffer, or wherein the oligo, linker and solid support has the formula as depicted in claim 19, or wherein X of the formula of claim 19 is the 3' terminal of the oligo, or wherein the protecting group of claim 19 has a specific composition.

The rejection of the above claims under 35 U.S.C. § 103(a) of the previous Office action was based on the combination of Lyttle et al. who teach oligonucleotides bound to a solid support via universal linkers, with Kempe et al., who teach cleaving oligonucleotides from solid supports using gaseous ammonia.

Applicants have traversed the rejection above on the grounds that Lyttle et al. actually teach away from combining the method of Lyttle et al. with the method Kempe et al., because Lyttle et al. teach that strongly basic conditions such as those used by Lyttle et al. are a limitation in the cleavage reactions. Applicants state that it is inappropriate to combine references when the references actually teach away from their combination. Furthermore, because Kempe et al. use such strongly basic conditions, one would not have been motivated to combine the references since Lyttle et al. teach away from using strongly basic conditions.

This position is not adopted. In response it is pointed out that Lyttle et al. use strongly basic conditions in their only disclosed method of cleaving the universal linker from the oligonucleotide (from page 1813, 1<sup>st</sup> paragraph): "Concentrated aqueous ammonia (0.5 ml) was added and the tube heated in an aluminum hot block at 60<sup>0</sup>C for 3 hrs with the PEG polystyrene support. Cleaved products were then evaporated to dryness for subsequent analysis."

Because the concentrated aqueous ammonia of Lyttle et al. comprises a strongly basic conditions, Lyttle et al. does not teach away from the invention as asserted by Applicants. In fact, the quotation provided by Applicants in support of their conclusion that Lyttle actually teaches away, when viewed in its proper context, simply explains why a different linker has not been widely adopted for use, and further, provides a context for why the new linker of Lyttle et al. is a contribution over the prior art; in other words, Applicants' quoted phrase explains why the findings of Lyttle et al. are novel and thus worthy of publication. As such, Applicants' quote does not reverse the relevance of Lyttle's use of strongly basic cleavage conditions to the instant rejection. For these reasons, Applicants' arguments are not convincing, and the claims above stand rejected under 35 U.S.C. § 103(a).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension under 37 CFR 1.136(a) will be determined from the mailing date of the advisory action. If no first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension under 37 CFR 1.136(a) will be determined from the mailing date of the advisory action.

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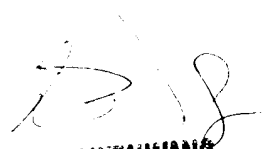
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Douglas Schultz whose telephone number is 703-308-9355. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John L. LeGuyader can be reached on 703-308-0447. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-305-3014 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

James Douglas Schultz, PhD  
March 6, 2003

  
**ANDREW WANG**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**